

**ABSTRACT**

Process and system for the production of synthesis gas from  
5 a hydrocarbon feed stock comprising the steps of endothermic and/or adiabatic catalytic steam reforming and auto-thermal steam reforming in series, wherein the steam reforming is carried out in one or more endothermic stages in series or in one or more adiabatic steam reforming stages  
10 in series with intermediate heating of feed stock gas leaving the adiabatic reforming stages and wherein carbon monoxide containing gas characterised by having a molar ratio of hydrogen to carbon of less than 4.5 is added prior to at least one of the endothermic or adiabatic steam reforming  
15 stages and/or prior to the auto-thermal steam reforming step.